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SECTION 2

Alternatives

This section describes the range of alternatives developed to address the purpose and need factors identified in Section 1. It presents the initial broad range of alternatives considered, the screening process for reducing that range of alternatives, the reasonable alternatives retained for detailed study, and the reasons other alternatives were eliminated from further consideration. The discussion consists of five major parts. The first part describes the reasonable alternatives selected for detailed evaluation. The second describes the alternatives development and screening decisions made during the alignment studies between 2002 and 2005. The third part contains a detailed description of the reasonable build alternative, and the fourth describes other alternatives considered. This section concludes with discussion of selection of a preferred alternative.

2.1 Alternatives Selected for Detailed Study

2.1.1 No-Build Alternative

The No-Build Alternative consists of doing nothing to IL 29 other than continued routine maintenance. No capacity improvements would be made. Improvements would be limited to short-term restoration activities (maintenance improvements) needed to ensure continued use of IL 29 between IL 6 and I-180. The design of the existing roadway, including location, geometric features, and capacity limitations, would remain unchanged, but minor changes that would improve safety may be anticipated at high volume intersections. Generally, the No-Build Alternative would not require new right of way and would avoid impacts to the natural environment and to agricultural, residential, and commercial properties. The No-Build Alternative would not address the deficiencies along IL 29 identified in Section 1 and, therefore, would not meet the project's purpose and need. Although the No-Build Alternative is not considered a reasonable course of action, it is retained for detailed evaluation as a basis of comparison to the Build Alternative.

2.1.2 Build Alternative

One build alternative, referred to as "the proposed project," remains under consideration (Exhibit 2-1). The proposed project begins at the south end of the corridor at the IL 6 interchange. From there to the point north of Chillicothe where the alignment rejoins IL 29, about 10 miles north, it would be a freeway section on new alignment.

From the IL 6 interchange, the proposed project would continue north, passing west of the Caterpillar Tech Center on Cedar Hills Drive (west of Old Galena Road). A diamond interchange with one loop is proposed at Cedar Hills Drive. North of Cedar Hills Drive the alignment curves to the northeast and crosses Old Galena Road. The alignment continues northeast crossing Wayne Road, near the intersection with Rome West Road where a diamond interchange is proposed. The alignment continues northeast to an extension of McGrath Street, where another diamond interchange is proposed. North of the proposed

McGrath interchange, the alignment runs north-south (2 miles west of existing IL 29) to Truitt Road. IL 29 passes over Cloverdale Road and Sycamore Street. A diamond interchange with one loop is proposed at Truitt Road. North of Truitt Road, the alignment crosses over the Burlington Northern and Santa Fe (BNSF) railroad and Senachwine Creek (South) and curves to the east after crossing Senachwine Creek. Continuing to the east, the alignment runs beneath Benedict Street and rejoins IL 29 with a proposed trumpet interchange north of Chillicothe.

Within Chillicothe, existing IL 29 would be improved to a 4-lane undivided arterial between the proposed interchange north of Chillicothe and the railroad viaduct. Between the viaduct and Truitt Road, IL 29 would be a 5-lane section with a 2-way left-turn median to match the typical section south of Truitt Road. The south viaduct structure would be removed and replaced, and the north viaduct crossing would be eliminated.

From the proposed north Chillicothe interchange to the north project terminus, IL 29 would be a 4-lane divided expressway. The expressway was selected to accommodate the local road connections to IL 29 and other access points. Use of a freeway section north of Chillicothe would require constructing long segments of frontage roads to provide access to local roads and driveways and would increase the impacts to the natural and built environment.

From north of Chillicothe to north of Sparland, widened IL 29 would use existing travel lanes for the northbound roadway and widen to the west side of IL 29 for the southbound roadway (into the bluff). The median would narrow from 50 to 22 feet to minimize impacts to the bluff. Through the Sparland interchange area, IL 29 would be relocated to the east by crossing over the Lincoln & Southern railroad tracks and IL 17 with a bridge. The bridge would be wide enough to accommodate the existing railroad tracks as well as a future track. North of Sparland, IL 29 would be widened to the west through the Camp Grove Road intersection and continue north of 1300E, where the alignment would curve north on a bypass west of Henry. The proposed project would have an interchange at Western Avenue 0.5 mile west of existing IL 29 and a grade separation under Old Indian Town Road. Intersections are proposed at Whitefield Road and the Marshall County/Putnam County line. The alignment would rejoin IL 29 north of the county line. Widening would occur west of IL 29 through Putnam, to the intersection of Cabin Hill Road. North of Cabin Hill Road, the alignment would shift to the east to avoid the Miller-Anderson Woods Nature Preserve. The improvements would shift back to the existing IL 29 centerline near Kentville Road. The improvements north of Kentville Road would terminate 0.5 mile south of the I-180 interchange ramps.

By providing a 4-lane divided connection between IL 6 and I-180, the Build Alternative would meet the project's purpose and need. The proposed improvements to IL 29 would improve the system linkage/route continuity between IL 6 and I-180 and provide more reliable transportation service between the south and north ends of the project area. As a 4-lane divided facility, the Build Alternative would provide a more efficient facility than existing IL 29. It would maximize the benefits of existing intermodal connectivity in the project area and provide greater options for the project area's industrial employers, agri-industries, and their suppliers. Increasing travel efficiency and reliability on IL 29 would likely reduce transportation costs for commuters, commercial trips, and other trips through the study area. The potential reductions in transportation costs and the increased efficiency of IL 29 will help maintain economic development in the study area.

Information about the basic features of the Build Alternative is found below. A more detailed description of the proposed project is addressed under subsection 2.3, Detailed Description of the Proposed Project.

2.1.3 Basic Features of the Build Alternative

The roadway types considered included a full access-controlled freeway and a 4-lane partial access-controlled expressway. Access to a freeway is allowed only at grade-separated interchanges. Along the freeway, interchanges would be located to provide access to be consistent with existing travel patterns.

For expressway sections, interchanges would be provided at all U.S.- and state-marked routes where justified by the cross traffic volume, and at all major crossroads where traffic signals would otherwise be warranted within 9 years of initial construction. Direct access is permitted along an expressway for residences and farms but not for commercial uses. Crossroads at all interchanges would be access-controlled for a distance of 600 feet from the ramp terminal intersections.

The freeway was selected as the preferred roadway type from IL 6 to north of Chillicothe because the greater access control provided by the freeway section would reduce conflicts between traffic on local roads and traffic on the proposed project. Since the proposed project would be on new alignment in a rural area, fewer local roads or other previously established access points would have to be joined to the proposed highway. This makes it possible to construct the new facility with limited affect on the local travel patterns.

The typical freeway section includes two 12-foot travel lanes in each direction separated by a 56-foot grass median. The median would consist of paved shoulders and grassed areas (Exhibit 2-2). The typical paved shoulder width would be 10 feet for the right shoulder and 4 feet for the left (with an additional 2 feet unpaved). Roadside ditches and median inlets would be provided for drainage as appropriate.

IL 29 would be constructed as an expressway from the interchange north of Chillicothe to the north project terminus. At-grade intersections would be permitted at crossroads (that is, at township, county, and state highways), and access would be permitted from residential and agricultural properties with a specified minimum distance of 500 feet (for rural areas) between access locations. At interchanges, the expressway would be access-controlled for a distance of about 1,500 feet from the ramp tapers on either side of each interchange. The roadway section would be the same as the freeway section, except that the median would vary in width from 22 feet in areas with constraints on both sides of the road to 50 feet in other areas. The 22-foot median requires a concrete median barrier because adequate clear zone would not be provided between opposing lanes of traffic (Exhibit 2-2). For constrained areas, retaining walls or guardrail may be used and closed drainage systems would be provided where necessary.

Because of unstable bluff soil and rock on the west side of proposed IL 29, a split profile would be used for part of the constrained section from north of Chillicothe to south of Camp Grove Road. In select locations south of Sparland, a split profile would be required to eliminate impacts to the environmentally sensitive areas. The typical section for the split profile section includes a retaining wall between the northbound and southbound roadways and a concrete median type barrier on the west side of the southbound roadway next to the

bluff (Exhibit 2-3). The treatment on the west side of the road may vary between retaining wall and concrete barrier depending on the height required. This would minimize cuts into the unstable bluff soil.

2.2 Build Alternative Screening

The sole remaining Build Alternative described in this chapter evolved from alignment studies conducted between 2002 and 2005. The object of the studies was to evaluate a wide range of alternatives to address the transportation deficiencies described in Section 1. To facilitate the development and comparison of alignments in the 35-mile-long study corridor, the project was divided into three sections:

- **South:** IL 6 interchange to a point east of the Benedict Street bridge, north of Chillicothe (Exhibit 2-4)
- **Central:** A point east of Benedict Street (north of Chillicothe) to a point north of Camp Grove Road (to Crow Creek) (Exhibit 2-5)
- **North:** North of Camp Grove Road to I-180 (Exhibit 2-6)

The sections were subdivided for further refinement. Because of the length of the project area and the numerous possible alignments within each section, the project team focused on developing and screening alignments within sections and subsections instead of on single alternatives that extended from IL 6 to I-180.

Alternative alignments were studied within the South, Central, and North sections. Initially alignment names were developed by combining letters and numbers representing each section, subsection (1, 2, or 3), number within the subsection, and relative location (east or west; Exhibits 2-4 through 2-6). As alignments were evaluated and eliminated, the remaining alignments were renamed using a simplified naming convention, developed in July 2003 and based on section, alignment number, and subsection letter where necessary. The discussion below uses the original and simplified naming convention for screening decisions prior to June 2003. After June 2003, only the simplified naming convention was used.

The screening process described below involved input from the project's Technical Advisory Committee and the public. A wide range of environmental and socioeconomic resources and engineering issues was considered during the screening process. The goal of the screening process was to develop alternatives that would minimize impacts while addressing the transportation deficiencies identified in Section 1. A posted speed of 65 mph was a requirement for all mainline segments of the roadway.

The process the project team used to arrive at the proposed project is described below, chronologically and by section.

2.2.1 2002 (Project Start) to June 2003

Between early 2002 and spring 2003, the project team developed and evaluated the initial range of project alignments listed in Table 2-1 and shown in Exhibits 2-4 (South Section), 2-5 (Central Section), and 2-6 (North Section).

TABLE 2-1
Screening of Preliminary Alignments: 2002 to June 2003

Project Section	Alignments Eliminated from Consideration	Reasons for Eliminating Alignments	Alignments Carried Forward
South	S-1 (S-01-W1W)	Potential proximity impacts to Singing Woods Nature Preserve; public opposition from Heart of Illinois study; poor access to Chillicothe.	S-4A/B (S-01-W4W/S-01-W4E) S-5A/B (S-01-W5W/S-01-W5E)
South	S-2 (S-01-W2W)	Greatest floodplain impacts (137 acres); most stream crossings (6); highest cost ($129 million)	
South	S-3/3A (S-01-W3W/S-01-W3E)	Most residential displacements (9)	
South	S-01-E	See text below.	
Central	C-1/1A (C-01W-N, C-02-W, C-03W-D, C-03W-ND)	Poor access to Hopewell and Sparland; highest Farmland impacts (191 acres); most new right of way (221 acres).	C-2/2A/2B (C-01W-N, C-01E-NS, C-01E-N, C-01W-S, C-01E-NS, C-02-E, C-03E-ND, C-03E-D) C-3/3A (C-01-WC, C-02-WC, C-02-WC (RR), C-03-WC)
Central	C-2C (C-01E-S)	Residential displacements (4), greatest forest impacts (31 acres)	
North	H-1 (N-01-FW)	Poor access to Henry, farmland impacts (191 acres)	H-3 (N-01-C)
North	H-2/2A (N-01-WA, N-01-W)	Poor access to Henry, farmland impacts (195 acres)	H-4 (N-01-EC)
North	H-5/5A (N-01-E) (Henry through-town)	See text below.	N-2/2A (N-02A-WCN, N-02-WCN, N-02A-WCN (RR), N-02-WCN (RR), N-02-A, N-02-WNN)
North	N-02A-WNN, N-02B-WNN, N-02A-Oneway2, N-02B-Oneway2, N-03-EN	Potential impact to Indian burial grounds, two grade-separated railroad crossings with ramps to access IL 29.	N-4 (N-02A-E1, N-02B-E1, N-02A-E2, N-02B-E2, N-02A-Oneway1, N-02B-Oneway1, N-03-WC, N-03-WN (RR), N-03-EC, N-03-Oneway)
Chillicothe		Through-town (see text below).	See text below.

Six alignments were evaluated in the South Section, five of them on relocated alignments ranging from 1 mile to 4 miles west of IL 29. With the exception of the westernmost alignment, which runs along the edge of the bluff, the other alignments use some part of Wayne Road or Krause Road along their length (Exhibit 2-4). Three alignments had two subsections each that crossed Senachwine Creek (South) at various locations. Improving existing IL 29 from the IL 6 intersection through Chillicothe was also considered.

Three basic alignments were reviewed in the Central Section: one along IL 29 and two along bypasses located 2 and 2.5 miles west of IL 29 (Exhibit 2-5). The alignment along IL 29 contained two options through Sparland, with and without railroad relocation. After crossing Senachwine Creek (South), there were three possible connections to the two bluff alignments. Similarly, at the north end of the bluff alignments, there were different routes coming off the bluff, but all tied into IL 29 at the Camp Grove Road intersection.

In the North Section, four bypass alternatives west of Henry were developed, as well as improvement of existing IL 29 through Henry (Exhibit 2-6). The bypass alignments ranged from 0.5 mile to 2 miles west of IL 29. North of Henry and the Marshall-Putnam county line, one alignment along existing IL 29 and three alignments off existing IL 29 were studied. Subsections within the alignments also were considered.

Because of various engineering and environmental impacts, many preliminary alignments were eliminated from further consideration (Table 2-1). In the South Section, the Chillicothe through-town alignment was eliminated because accommodating a 65-mph facility between IL 6 and Truitt Road would have displaced many businesses and residences and created a barrier in the heart of the community's commercial district. A Henry through-town alignment was evaluated and eliminated for similar reasons. Improving IL 29 to freeway standards would have resulted in numerous commercial displacements south and north of Western Avenue and impacts to the fairgrounds and the high school. Elimination of the through-town alignments left only a "bypass" alignment as a feasible option in either community.

Table 2-1 also lists the alignments retained for study. Alignments that were eliminated from consideration or carried forward were presented to the Technical Advisory Committee in November 2002 and to state and federal review agencies during the first merged NEPA/ Section 404 meeting in April 2003. IDOT's screening decisions were agreed upon by participants at both meetings. The alignments carried forward for study were displayed at the first set of public information meetings on June 11 and 12, 2003 (Exhibit 2-7).

2.2.2 July 2003 to January 2004

IDOT used the input from the June 2003 public information meetings, the development of preliminary engineering plans, and the additional environmental data gathered during field surveys to continue screening alignments between July 2003 and January 2004. Exhibit 2-7 shows the alignments under consideration at the start of the screening period. The screening decisions are discussed by project section below.

2.2.2.1 South Section

Following the June 2003 public meeting, Alignment S-6 was added to the South Section alignments array. From IL 6 to a point south of Cedar Hills Drive, Alignment S-6 is the same as Alignment S-4. From Cedar Hills Drive to about Rome West Road, Alignments S-6 and S-4 are distinctly different. Alignment S-6 bypasses the Caterpillar Tech Center on its west side and crosses Old Galena Road just south of the Audubon Wildlife Center before heading east toward Rome West Road. Alignment S-4 crosses Cedar Hills Drive east of Alignment S-6 passing between Caterpillar's two plants and remains east of Alignment S-6 to a point north of Rome West Road where Alignment S-6 joins Alignment S-4.IDOT eliminated the part of Alignment S-4 from south of Cedar Hills Drive to Rome West Road and retained Alignment S-6. Alignment S-6 allows a better interchange design configuration at Cedar

Hills Drive and would be less disruptive to Caterpillar plant operations than Alignment S-4. Between Rome West Road and Truitt Road, IDOT also eliminated Alignment S-5 west of Chillicothe, and retained Alignment S-4 (Exhibit 2-7). Alignment S-4 was retained because the Village of Chillicothe indicated that it would be more compatible with the Village's land use plan than Alignment S-5. Alignment S-4 would also cross the narrow north tip of the Galena Road Gravel Quarry avoiding the constructability issues posed by Alignment S-5, which would cross a deeper and wider area of the quarry east of S-4.

North of Truitt Road, Alignment S-5B, the connection between Alignment S-5 and the Central Section alignments, was eliminated and Alignment S-4B was retained. Alignment S-5B was eliminated because its proposed alignment south of Senachwine Creek (South) would likely have three stream crossings rather than the single crossing with Alignment S-4B. It is expected that Alignment S-5B would cross the stream twice where it bends south between stations 3185 and 3195, and again between stations 3215 and 3225, before tying into Alignment S-4B (see Exhibit 2-4 and Aerial Exhibit, Sheet 6). An additional reason for eliminating Alignment S-5B is that it would be centered in Senachwine Creek's 100-year floodplain rather than at its edge like Alignment S-4B. Following the June 2003 public information meeting, Alignment S-4B was realigned to the west to improve the angle at which the roadway would cross Senachwine Creek (South) and to move the alignment to the north edge of the creek's 100-year floodplain.

2.2.2.2 Central Section

Alignment C-2, west of C-2A in Peoria County, was eliminated because it would require an interchange north of Chillicothe to be constructed in the bluffs northwest of Chillicothe. The cuts and fills required to construct an interchange in the bluffs would create much more complicated constructability issues than a north Chillicothe interchange along Alignment C-2A. The Alignment C-2 interchange on the north side of Chillicothe would be connected to existing IL 29 by Hart Lane. To accommodate the volume of truck and auto traffic that would want to access Chillicothe at this location, Hart Lane would have to be improved. Widening Hart Lane would affect residential properties along Hart Lane. Alignment C-2A was retained because the proposed interchange would be constructed in the relatively flat area between Hart Lane and Senachwine Creek (South) and it would allow a direct connection to Chillicothe north of the viaduct.

In Sparland, IDOT eliminated Alignment C-3, the through-town option, and retained alignment C-3A because it had fewer potential displacements (11 versus 30) and allowed better traffic circulation in Sparland. Because future traffic volumes on IL 29 and IL 17 would be too high to be accommodated efficiently at the existing at-grade intersection, five interchange alternatives were developed in Sparland to connect the two highways (Exhibit 2-8). The object in developing the five alternatives was to minimize impacts to the community, minimize impacts to IDNR property, minimize impacts to wetlands and floodplains, and provide a standard interchange design.

2.2.2.3 North Section

Following the June 2003 public information meeting, Alignment H-3 was dropped and H-4 retained. H-4 is closer to Henry than H-3 and is preferred by Henry officials. Alignment H-4

would affect less cropland (211 acres versus 257) and require less new right of way than H-3 (249 acres versus 275).

Three access options were developed for the Putnam area. Mainline location and design is the same for all options. They differed in access allowed at intersections with Bradford, Douglas, Courtland, Main, and High streets (Table 2-2). Crossroad geometry varies among them as well. Option 1 closes the Main Street/Senachwine Lake Road intersection creating 2,400 feet of spacing between the Bradford Street and High Street intersections with IL 29. IDOT recommends approximately 2,600 feet of intersection spacing on expressways like IL 29. Options 2 and 3 keep the Main Street intersection open and are only able to achieve 1,500 feet of spacing between the Bradford Road and Main Street intersections.

TABLE 2-2
Access Options for the Putnam Area

Street	Option 1	Option 2	Option 3
Bradford	Full intersection, extends east of IL 29	Full intersection, no extension east	Full intersection, no extension east
Douglas	Closed at IL 29	Closed at IL 29	Closed at IL 29
Courtland	Closed at IL 29	Closed at IL 29	Closed at IL 29
Main (west) / Senachwine Lake (east)	Closed at IL 29	Full intersection at better angle	Full intersection at same angle
High	Full “T” Intersection	Right in/right out	Cul-de-sac

Alignment N-4, located east of Putnam and the railroad, was eliminated because it would have:

- 49 to 87 more acres of impact to agricultural land than N-2 and N-2A
- 9 to 15 more acres of impact to wetlands than N-2 and N-2A
- 40 more acres of impact to floodplains than N-2 and N-2A.

In addition, Alignment N-4 was eliminated because it would be located in the Miller-Anderson Woods Natural Area (east of IL 29) and potentially impact two protected species, the bald eagle and the decurrent false aster. The two alignments through the Miller-Anderson Woods Nature Preserve that remained then were N-2 and N-2A. These two alignments, located along existing IL 29, were expanded to the following five alignments:

- **N-2A:** 50-foot-wide median, no retaining walls, CSX railroad relocation 100 feet east of the existing tracks
- **N-2B:** 50-foot-wide median, retaining wall on the east side of IL 29, CSX railroad relocation 44 feet east of existing tracks
- **N-2C:** 50-foot-wide median, retaining walls on the east and west sides of IL 29, CSX railroad relocation 28 feet east of existing tracks
- **N-2D:** 47-foot-wide median, retaining walls on the east and west sides of IL 29, no railroad relocation
- **N-2E:** 22-foot-wide median, retaining walls east and west of IL 29, no railroad relocation

The screening and new alignment decisions were presented to the Technical Advisory Committee on January 20, 2004. Meeting participants concurred with IDOT's alternatives recommendations.

2.2.3 February to July 2004

Within the period February to July 2004, preliminary plans were submitted to IDOT for the South Section (June 2004), Central Section (April 2004), and the North Section (April 2004). The additional engineering information gathered from the plan development and additional environmental data were used to screen the alignments in the three project sections. Exhibit 2-9 shows the alignments under consideration at the start of the screening period. The screening decisions are described below by project section.

2.2.3.1 South Section

The only alignment change in the South Section during the period was to refine the design of Alignment S-6 east of Old Galena Road to create Alignments S-6B and S-6C (Exhibit 2-10). IDOT created the two alignments to investigate whether farm severances could be reduced.

Two interchanges were evaluated at Cedar Hills Drive: a diamond and diamond with a loop in the southwest quadrant. The diamond with a loop in the southwest quadrant would maximize use of IDOT's right of way south of Cedar Hills Drive.

Interchanges were developed for Rome West Road and McGrath Road for Alignments S-6B and S-6C. A standard diamond interchange was developed at McGrath Road. A new connection would be developed between the interchange and Krause Road to the west. A connection also is planned along the north side of Three Sisters Park between the interchange and existing IL 29. The IDOT has decided that the McGrath Road interchange would not be constructed as part of the proposed project. Construction would be delayed until development in the McGrath Road area warranted an interchange. At that time, IDOT would construct the interchange and the connection to Krause Road, but the east connection to existing IL 29 would have to be funded by others.

At the proposed Truitt Road interchange, the diamond interchange with a loop ramp in the southeastern quadrant was selected over the traditional diamond interchange because it would not acquire new right of way from the Galena Gravel Quarry operation in areas of deep quarry excavation.

2.2.3.2 Central Section

Three interchange configurations were developed and evaluated at the north Chillicothe interchange: Alternative 1 (trumpet interchange), Alternative 2 (diamond interchange with Hart Lane), and Alternative 3 (diamond interchange with Yankee Lane; see Exhibit 2-11).

In Sparland, interchange Alternatives 1 (diamond with railroad relocation) and 5 (high-type intersection, see Exhibit 2-8) were eliminated from further consideration. Alternative 1 was eliminated because it had higher overall impacts than the other alternatives and Alternative 5 had tight loop ramps with a low design speed (Table 2-3). Alternatives 2 (diamond without railroad relocation), 3 (split diamond), and 4 (standard diamond east of IL 29) were retained. Table 2-3 presents a comparison of the five interchanges in Sparland.

2.2.3.3 North Section

In Putnam, Options 2 and 3 were eliminated because they keep the Main Street intersection open and are only able to achieve 1,500 feet of spacing between the Bradford Road and Main Street intersections. IDOT recommends 2,600 feet of intersection spacing on expressways like IL 29. Option 1 was carried forward because it closes the Main Street/Senachwine Lake Road intersection creating 2,400 feet of spacing between the Bradford Street and High Street intersections with IL 29. Greater intersection spacing is proposed because of the numerous truck movements generated by the grain elevator business. Greater distance allows for longer acceleration and deceleration lanes for trucks and improved intersection geometry. Option 1 will also improve intersection geometry, and improve access to grain elevator business (with the extension of Bradford Road east of IL 29).

Near the Miller-Anderson Woods Nature Preserve, Alignments N-2A, N-2B, and N-2C, each of which involved relocating the railroad to the east, were eliminated from consideration because of their higher overall impacts, particularly on wetlands, floodplain and the Miller-Anderson Woods Natural Area (Table 2-4). Alignment N-2D, which did not relocate the railroad but maintained a 47-foot median, was eliminated from consideration because it would require a costly and complex drain system to accommodate drainage in the narrowed right of way between the highway and railroad.

Alignment N-2E, which did not relocate the railroad and had a 22-foot median was carried forward. Further refinements to N-2E included moving it 8 feet to the east to eliminate the need for a retaining wall on the west side of IL 29.

The screening decisions listed above were presented to the project's Technical Advisory Committee on June 9, 2004, and concurred with by meeting participants. The alignments eliminated subsequent to the June 2003 public information meeting and the remaining alignments were presented to the public at the second set of public information meetings on July 13 and 14, 2004. Exhibit 2-10 shows the alignments on display at the July 2004 meetings. Interchange alternatives proposed throughout the project area were also displayed.

2.2.4 August 2004 to March 2005

IDOT used input from the July 2004 public information meeting and engineering and environmental data gathered as part of developing preliminary plans to make the final series of alignment screening decisions. Exhibit 2-10 shows the alignments under consideration at the start of the period. The screening decisions are listed below by project section.

2.2.4.1 South Section

Alignment S-6B was carried forward because it was perceived by the public as less disruptive to Galena Knolls subdivision on Rome West Road. Alignment S-6C was eliminated.

Cedar Hills Drive Interchange.The diamond interchange with the loop ramp in the southwest quadrant was selected to maximize use of existing IDOT right of way south of Cedar Hills Drive. The standard diamond interchange was eliminated from further consideration because it would require 10 more acres of right of way from private property than the diamond interchange with a loop ramp.

TABLE 2-3
Sparland Interchange Alternatives Comparison

Configuration	Alternative 1 Diamond (Relocated) (Eliminated)	Alternative 2 Compressed Diamond (on Existing IL 29) (Carried Forward)	Alternative 3 Split Diamond (Relocated) (Carried Forward)	Alternative 4 Diamond (Relocated) (Carried Forward)	Alternative 5 Modified Intersection Type (Eliminated)
Wetland, acres	16	9	8	11	4
Floodplain, acres	84	50	44	65	34
Forest Area, acres	12	12	19	16	12
Natural Area (not IDNR), acres	0	0	0	0	0
IDNR, acres	19	12	7	13	7
Potential Displacements					
Commercial	7	6	1	1	2
Residential	21	34	11	12	35
Outbuildings Impacts	34	46	14	18	46
U.S. Post Office and Sparland Village Hall Relocated	Yes	No	No	No	No
Fellowship Baptist Church Relocated	No	Yes	No	No	Yes
Potentially Historic Property, Building at Whiffle Tree Place	Yes, property	No	Yes, property	Yes, property and building	No
Right of Way Impacts (Additional Right of Way), acres	66	57	55	69	43
Visual Impact to Residences	High	High	Low	Medium	Medium
Farmland, acres	30	20	36	43	14

TABLE 2-4
Miller Anderson Woods Alternatives Comparison

	New Right of Way[a] (ac)	Wetland Impacts (ac)	Floodplains IL River (ac)	Natural Area[b] (ac)
N-2A 100 ft RR relocation	92.0	11.6	62.8	18.6
N-2B 44 ft RR relocation	75.7	5.9	47.8	14.5
N-2C 28 ft RR relocation	72.6	4.4	44.8	13.4
N-2D No RR relocation, 47 ft median	67.5	3.3	28.9	6.9
N-2E No RR relocation, 22 ft median	67.5	3.3	26.4	5.7

[a]136.7 acres of existing roadway right of way is used. 27.9 to 1.2 acres of existing railroad right of way is used.
[b]Later in the study (2005) the size of the natural area was reduced when IDNR eliminated part of the area previously designated as natural area.

Rome West Road and McGrath Road Interchanges. Following the July public information meeting, IDOT determined that proper interchange spacing could be maintained if interchanges were constructed at both Rome West Road and McGrath Road. The standard diamond interchange was maintained at McGrath Road. Six interchange types were evaluated at Rome West Road. Four interchanges were eliminated because IL 29 was grade separated over Rome West Road. These alternatives would result in higher initial construction costs and greater maintenance costs. The fifth alternative was eliminated because it would align Rome West Road to the north. IDOT selected a standard diamond interchange with Rome West Road over IL 29 because it would better meet driver expectation and have lower construction and maintenance costs. Rome West Road would tie into the proposed Knox Street extension. The extension would be on new alignment north of the residential properties on North 6th Street and tie into the existing Knox Street/IL 29 intersection.

2.2.4.2 Central Section (Bluff Alignment)

The Bluff Alignment (C-2) was developed at the start of the study to avoid what were expected to be impacts to IDNR property (a likely Section 4(f) resource) and privately owned natural areas. To a lesser extent, the Bluff Alignment was viewed as a means of minimizing wetland and woodland impacts associated with improving existing IL 29.

As part of the study, the project team evaluated the amount of traffic that would be carried by either an improved IL 29 or by the Bluff Alignment in the design year 2032. The analysis found that between 7,300 and 15,600 vehicles per day would use a widened facility along IL 29 in the Central Section. The Bluff Alignment was predicted to carry 2,850 to 3,800 vehicles daily, leaving 5,700 to 12,600 vehicles per day on the existing 2-lane IL 29.

Marshall County residents living east of the Illinois River use the IL 17 bridge to access the west side of the river. For residents west of the Illinois River, IL 17 provides a direct connection to I-39. Alternate river crossings are located 7 miles north on IL 18 or 25 miles south on US 24/US 150. Frequent or recurring travelers from east of the Illinois River

working, visiting or doing business in Sparland, Chillicothe, or Peoria will use the route most reasonable to them, either existing IL 29 or widened IL 29.

If the Bluff Alignment were constructed, the route of choice for most travelers would still be existing IL 29. Failure of the Bluff Alignment to attract travelers and alleviate future congestion on IL 29 would mean that it had not fulfilled the object of providing a safe and efficient highway to serve existing and future travel demands for both regional and local travelers. For that reason, FHWA concurred with the project team's recommendation to drop the Bluff Alignment from further consideration during a meeting on November 9, 2004. That recommendation was presented to agencies at the second NEPA meeting on March 1, 2005. The agencies postponed a decision on the Bluff Alignment until the project team provided more information about how future traffic volumes on existing IL 29 and the Bluff Alignment were developed. IDOT sent the agencies a memorandum with additional traffic information, and the agencies concurred with elimination of the Bluff Alignment (see Appendix A, State and Federal Agency Coordination, NEPA/404 Merger Process, pp. A-15 to A-27).

2.2.4.3 Central Section (Existing Alignment)

The three north Chillicothe interchanges (Alternative 1, trumpet; Alternative 2, diamond with Hart Lane; Alternative 3, diamond with Yankee Lane) had similar impacts and costs, but Alternative 1 was retained because the trumpet interchange would provide a free-flow movement for vehicles traveling between Chillicothe and Sparland, the predominant movement through the interchange. The diamond interchanges in Alternatives 2 and 3 required traffic to stop and make turns at the ramp terminals before entering or exiting IL 29 between Chillicothe and Sparland.

IDOT considered two alternatives for widening IL 29 between IDOT's rest area (north of the north Chillicothe interchange) and IDNR's Land and Water Reserve south of Sparland: widening west while maintaining the same elevation between northbound and southbound lanes, or widening west with a split profile (the southbound lanes would be at a higher elevation than the northbound). Widening west at the same elevation was eliminated because it would require a strip of new right of way 30 to 50 feet wider than the split level alternative for most of the distance between Chillicothe and north of Sparland. The split elevation (Exhibit 2-3) was selected because it requires less new right of way from the west side of IL 29, thereby reducing impacts on privately owned natural areas and IDNR property. It also reduces the amount of excavation into the unstable bluff soils. The split profile is also used from north of the proposed Sparland interchange to a point just south of the IL 29/1100E intersection.

Interchange Alternative 3 (split diamond) in Sparland was carried forward because it minimized impacts to a greater degree than the other interchange alternatives (Table 2-5).

Alternative 2 (diamond interchange west of the railroad tracks) and Alternative 4 (diamond interchange east of the railroad tracks) were eliminated from consideration.

TABLE 2-5
Sparland Interchange Comparison (August 2004 to March 2005)

Impact	Alternative 2 Diamond without RR Relocation	Alternative 3 Split Diamond	Alternative 4 Diamond East of RR
Right of Way			
Existing Roadway Acres	83	69	69
Existing Railroad Acres	4	4	4
New Acres	110	108	122
Total Acres	197	181	195
Wetlands			
Hits	7	6	7
Acres	18	17	20
Floodplain Acres			
Illinois River	39	43	64
Gimlet Creek	6	0.4	0
Thenius Creek	6	1	1
Crow Creek	16	16	16
IDNR Properties			
Acres	12	7	13
Displacements			
Residential	42	19	20
Commercial	7	2	2
Historic Properties	0	1	1
Landlocked			
Number of Properties	1	1	2
Acres	7	8	8
Farmland			
Acres	47	19	25

Based on input from the Federal Emergency Management Agency (FEMA) and FHWA to avoid flood buyout properties in Sparland, interchange Alternative 3a was developed and compared to Alternative 3. The flood buyout properties are shown in Exhibit 3-23. Alternative 3a is located east of existing IL 29 and east of the developed properties along IL 17. Although Alternative 3a acquired 1 more acre of right-of-way than Alternative 3 and created a 4-acre parcel (as opposed to a 1-acre parcel with Alternative 3) west of IL 29 that would be isolated from the remainder of IDNR's Marshall State Fish and Wildlife Area (Sparland Unit) property, it was retained because it avoided the flood buyout properties. Alternative 3 was eliminated from consideration.

2.2.4.4 North Section

Different options were evaluated in the Crow Creek area to minimize impacts to floodplain and wetlands west of IL 29. The standard typical section with a 50-foot median and a ditch on the west side of IL 29 would affect 28 acres of floodplain and 13 acres of wetland. Constructing a retaining wall on the west side of IL 29 would reduce floodplain impacts to 15 acres and wetland impacts to 5 acres. The retaining wall option would cost $36 million to construct. Ultimately, IDOT decided to use a guardrail on the west side of IL 29 with 2:1 side slopes as a compromise solution (Exhibit 2-12). The guardrail would cover two areas with a total length of 5,200 feet. This option would affect 25 acres of floodplain, 11 acres of wetland and cost $24 million. The feasibility of using steeper than 2:1 side slopes with reinforced earth foreslopes will be investigated in a future design phase.

2.3 Detailed Description of the Proposed Project

2.3.1 South Section

The general location of the proposed project in the South Section is shown on the following page. The more detailed view is found in Aerial Exhibit sheets 1 through 6. The proposed project begins at the IL 6 interchange with the focus of the work there being ramp related. The geometry of the westbound to southbound ramp will be improved, and the northbound exit and entrance ramps and southbound to eastbound ramp will be completed. The new IL 29 mainline will begin north of the existing IL 6 terminus. The 4-lane divided freeway section will extend within the existing right of way to Cedar Hills Drive. Dickison Lane and Boy Scout Road would be closed east of the proposed alignment. Access to properties west of the alignment would be gained from a 2-lane frontage road extending from Mossville Road to Cedar Hills Drive. The proposed bridge over Dickison Run would be designed to accommodate a wildlife crossing for large mammals.

At Cedar Hills Drive an interchange would be constructed with a loop ramp in the southwest quadrant. The interchange would be located mainly south of Cedar Hills Drive within existing IDOT right of way. IL 29 would pass under Cedar Hills Drive. Cedar Hills Drive would be expanded to a 4-lane roadway between the west side of the interchange and Old Galena Road to match the typical section on Cedar Hills Drive east of Old Galena Road.

North of Cedar Hills Drive the proposed project would be on new alignment west of Caterpillar's Tech Center. North of the Tech Center, IL 29 would curve northeast and pass over Old Galena Road immediately south of the undeveloped Audubon Wildlife Area.

North of Old Galena Road, IL 29 would continue northeast and cross Wayne Road south of the existing intersection with Rome West Road. A diamond interchange is proposed at Rome West Road. Rome West Road would pass over IL 29 and a new frontage road connecting Wayne Road (at Rome West Road) to Krause Road east of the interchange is proposed. East of this interchange, near the Rome West Road/North 7th Street intersection, Rome West Road would tie into the proposed Knox Street extension. The extension would be on new alignment north of the residential properties on North 6th Street and tie into the existing Knox Street/IL 29 intersection.

Continuing northeast, interchanges would be provided at McGrath Street and Truitt Road. The proposed project would cross over Old Galena, Wayne, and Krause roads and beneath Cloverdale Road and Sycamore and Benedict streets. All crossings would be bridges except Wayne Road, which would be on fill with realignment of Wayne Road to connect to Rome West Road at Krause Road.

North of Truitt Road, IL 29 would cross over the BNSF railroad and continue north and east, crossing Senachwine Creek (South). The Senachwine Creek bridge would be lengthened to provide a wildlife crossing. North of the creek crossing, IL 29 would bend east, aligned parallel to and over part of Ratliff Road. Two additional culverts east of Senachwine Creek would accommodate wildlife crossings. Continuing east, the proposed project in the South Section would end east of the relocated Benedict Street bridge.

2.3.2 Central Section

The general location of the proposed alignment for the Central Section is shown on the following page. A more detailed view is found in Aerial Exhibit sheets 7 through 12. In the Central Section, the proposed project would begin east of the relocated Benedict Street bridge from which the freeway facility would continue a short distance before entering the proposed north Chillicothe interchange area. A trumpet interchange is planned for the area between Hart Lane and IL 29. The interchange would allow free-flow movement for travel between Chillicothe and Sparland, which constitutes most of the traffic in the area. Southbound traffic leaving Sparland, would enter Chillicothe using the interchange's loop ramp. Northbound traffic from the bypass would enter Chillicothe from an exit ramp (Exhibit 2-11).

Improvements to existing IL 29 within Chillicothe are planned between Truitt Road and the north Chillicothe interchange. South of Truitt Road, IL 29 has 2 lanes in each direction plus a center 2-way left-turn lane and sidewalks on either side. North of the Truitt Road intersection to Wilmot Street, IL 29 has 2 lanes in each direction with a 5-foot flush median. The 5-foot median would be widened to 12 feet to accommodate left turning vehicles, and sidewalks would be provided on both sides of the road. North of Wilmot Street, where the cross section narrows to 2 lanes (under the existing viaduct), IL 29 would be widened to the west and have 2 lanes in each direction with an 18-foot raised median to the north Chillicothe interchange. The east leg of Moffit Street would be moved to the north to align with the west leg of Moffit Street along the IL 29 connector into Chillicothe. A strip of new right of way would be acquired from residences in Chillicothe between Truitt Road and the viaduct. Five residences (and two garages) west of IL 29 would be displaced. The strip of new right of way would create a continuous sidewalk between Truitt Road and just north of the railroad viaduct (for access to the Chillicothe Recreational Area). The outside lane of the 4-lane section of IL 29 from Truitt Road to a point south of the viaduct would be widened to 14 feet to provide a shared use lane on both sides of the roadway. The proposed sidewalk under the viaduct would accommodate both pedestrians and bicycles on the west side of IL 29 (10 feet wide) and bicycles only on the east side (8 feet wide). North of the Chillicothe Recreational Area and along proposed IL 29, bicycles would be accommodated on the 10-foot-wide outside paved shoulder on both sides of the roadway.

The south railroad viaduct would be reconstructed to accommodate two lanes of traffic in each direction with a center bridge pier (within an 18-foot raised median). A guardrail would be installed adjacent to the outside travel lanes (under the viaduct) separating the traffic from

the sidewalks on the east and west side of IL 29 (Exhibit 2-13). Continuing north, the north viaduct would be demolished requiring realignment of the BNSF yard track and maintenance road over the reconstructed south viaduct (Exhibit 2-14). The realignment would allow all existing through tracks to use the reconstructed south viaduct.

North of the reconstructed south viaduct, IL 29 would be expanded to a 4-lane divided facility with an 18-foot raised median as it approaches the trumpet interchange. North of the interchange, Hart Lane would be extended on new alignment west of IL 29 and tied into realigned Boehle Road. Realigned Boehle Road would partially follow existing IL 29, then continue north along existing alignment to Hardscrabble Road. This design would create a new connection from Hart Lane to Hardscrabble Road. A new intersection connecting Hart Lane and Boehle and Hardscrabble roads to IL 29 is proposed 1,500 feet north of the Yankee Lane/Hart Lane intersection with IL 29. On the east side of proposed IL 29, Yankee Lane would be realigned to tie into a frontage road serving the Chillicothe Driving Range property. Yankee Lane and frontage road traffic would access IL 29 at the intersection serving Hart Lane and Boehle and Hardscrabble roads.

Several wildlife crossings would be included in the design of box culverts and bridges from Benedict Street to Crow Creek on the north end of the Central Section. See Section 3.12 for more detail on proposed wildlife crossings.

The proposed project would widen IL 29 to the east across the Chillicothe Sportsman property, the Chillicothe Driving Range and IDOT's rest area. North of the rest area, the IL 29 median would transition from a 50-foot grass median to a 22-foot concrete barrier median and widen to the west to minimize impacts to natural areas and IDNR property on both sides of IL 29 south of Sparland. The IDOT rest area would be improved to allow for a weigh scale and truck maneuvering. The rest area intersection would have a service drives north and south of the rest area to provide access to one property to the north and three properties to the south, including IDNR. On the west side of IL 29 opposite the IDOT rest area, a small section of Crew Lane would be reconstructed and the south and north intersections of Crew Lane and IL 29 closed. A new intersection would be constructed at the north driveway of IDOT's rest area as would a new connection to Crew Lane. The proposed project would displace four residences located between IL 29 and Crew Lane.

A split profile typical section (southbound lanes at a higher elevation than the northbound lanes) would begin just north of the existing intersection with Crew Lane and continue north 0.5 mile to reduce impacts to County Line Hill Prairie Natural Area. The split profile typical section would have a 2- to 3-foot retaining wall in the median and a retaining wall that would vary from up to 7 feet along the west side of IL 29. There would also be a split profile typical section from 1,100 feet south of the Hopewell Estates Hill Prairies Natural Area to 800 feet south of the Hopewell entrance. The typical split profile would have a 3- to 10-foot retaining wall in the median and a retaining wall on the west side of IL 29 that would be up to 14 feet high. The entrance drive to the Village of Hopewell would be realigned to improve stopping sight distance along IL 29. A median opening would be constructed at the entrance to Hopewell to provide access for northbound and southbound travel.

A split profile and retaining wall would be proposed between 1,300 feet north of the Barrville Drive entrance and the north limits of the Marshall County State Hill Prairie Natural Area. The split profile section would be 3,400 feet long with a 3- to 10-foot retaining

wall in the median and a retaining wall varying up to 11 feet along the west side of IL 29. The widening to the west would displace the historic Barrville bridge and one residence near the IL 29/Barrville Drive intersection. North of Barrville Drive, widening would continue on the west side. The existing entrance to the Marshall State Fish and Wildlife Area west of IL 29 would be widened and extended for 900 feet south of the existing entrance. The driveway for the wildlife area east of IL 29 would be relocated to the south to improve safety at the railroad crossing in that area. The railroad tracks would be relocated east to provide a 90-degree crossing from IL 29 to the east side of the railroad. Because the Marshall County State Hill Prairie Natural Area extends into the IL 29 right of way on the west side, a minor impact (less than 1 acre) would occur at the property.

North of the Marshall County State Hill Prairie Natural Area, the split profile typical section ends as the proposed project enters the proposed Sparland interchange. A split diamond interchange separating the northbound exit and southbound entrance ramps from northbound entrance and southbound exit ramps is proposed. The proposed project would bend west of existing IL 29 starting about 2,500 feet south of the Sparland corporate limits. It would then move to the east and cross over existing IL 29 and the Lincoln & Southern Railroad tracks on a bridge. East of the railroad tracks, the proposed project would cross the agricultural field on the south side of Sparland on roughly 25 to 35 feet of fill. The proposed project would cross over Gimlet Creek and IL 17 east of the Whiffle Tree House and continue east passing roughly 100 feet west of Sparland's treatment ponds. The proposed project would cross over Thenius Creek and the Lincoln & Southern Railroad for the second time. The northbound entrance ramp and the southbound exit ramp would be located north of Thenius Drive, providing access to Sparland. The ramp at the north end of the interchange would require a 26-foot-high wall between the mainline and the ramp and a 29-foot-high wall between the ramp and the bluff on the west. The mainline through the interchange will have a 65 mph design speed instead of the 70 mph design speed used elsewhere. This is necessary because in certain areas, the median barrier walls will restrict the line of site of a driver traveling 70 mph. In order for a design speed of 70 mph to be achieved, the shoulders would need to be widened excessively. Widening the shoulder to increase the sight distance might lead the driver to think the shoulder is an additional lane. Therefore in the interest of safety, on the mainline through the interchange, a design speed of 65 mph will be used. Within the Sparland Interchange bikes will be diverted to existing IL 29.

In Sparland, IL 17 and existing IL 29 would be reconstructed at their existing elevations. Access to businesses and residences along IL 17 would not change. Along IL 29 north of the south leg of IL 17 access would remain the same, but would be modified south of the existing intersection. Oak and Maple Streets would be closed and Willow Street would remain open. Existing IL 29 on the south side of Sparland would be terminated south of Willow Street to provide for the entrance and exit ramps to and from proposed IL 29. The alley between Willow Road and Maple Street and Maple Street to Oak Street would be improved to provide internal circulation. A signal would be installed at the existing IL 29/IL 17 intersection (south leg). For safety reasons, left turns would be prohibited at Center Street east of the railroad tracks so that vehicle queues do not extend over the railroad tracks. Left turns would be permitted at Lacon Street, which would be improved. Vine Street would also be improved to provide connection back to Center Street. North of Sparland, five residences along the ramp west of IL 29 would be displaced by the proposed project.

North of the Sparland interchange, to minimize cuts into the bluff, a split profile commences and continues to the existing intersection of 1100E. The retaining wall on the west side of IL 29 would be up to 15 feet high while the median wall would be up to 18 feet high. Also north of Sparland, widening resumes on the west side of existing IL 29 and the 22-foot concrete median barrier would be used. The south intersection of Road 1100E with IL 29 would be closed. A new intersection would be constructed 3,100 feet north of the intersection to be closed. One residence north of the closed intersection and three residences along the west side of IL 29 north of the proposed intersection would be displaced. Access to properties north and south of the proposed 1100E will be along the connector rather than IL 29. The proposed intersection would also provide access to properties east of IL 29. Roughly 2,500 feet south of the intersection, the median would transition from 22 feet wide with a concrete median to 50 feet with a grass median. The proposed project would continue widening to the west through the Camp Grove Road intersection displacing a residence and two commercial storage buildings.

A new bridge would be constructed at the Crow Creek crossing. The bridge would be lengthened to provide for a wildlife crossing.

2.3.3 North Section

The general location of the proposed alignment for the North Section is shown on the following page. The more detailed view is found in Aerial Exhibit sheets 13 through 18. The North Section begins just north of the proposed Crow Creek bridge.

North of the new Crow Creek bridge, three residences west of IL 29 would be displaced. To limit wetland and floodplain impacts west of IL 29 a guardrail and steeper side slopes would be used in the Crow Creek area. The elevation of IL 29 would be increased roughly 10 feet to raise the travel lanes above the 50-year design water elevation. A new culvert would be constructed at the north end of the Crow Creek slough to replace the culvert under IL 29. The culvert would continue to drain to another culvert under the railroad tracks. A small animal wildlife crossing would be provided at the north crossing of Crow Creek.

North of the proposed culvert and the Crow Creek slough, widening continues on the west side of IL 29 through the IL 29/Old IL 29 (1150 N) intersection displacing a residence south of the intersection. That intersection would be realigned to the south to improve sight distance at the intersection. The realignment would change the access to the lumber warehouse located in the northwest quadrant of the intersection with the proposed project.

North of the old IL 29 intersection, widening would continue to the west, and the proposed project would realign the IL 29/1300E intersection to the north to improve sight distance. The west and east connections would be realigned to connect to the new intersection. The west widening would cross the AgView FS Coop property, displacing the warehouse, office and storage tanks. To the north, the proposed project would displace a farm residence before leaving the IL 29 alignment and veering northward across farm land (at the south end of the Henry bypass). At this point bikes will be directed off the mainline and on to existing IL 29 through Henry. This will provide a shorter route for cyclist to goods and services in Henry. The proposed project would proceed north on new alignment through farm fields toward Western Avenue (County Highway 6). A diamond interchange is

planned at Western Avenue, about 0.5 mile west of Henry. On the south side of Western Avenue, the proposed interchange would displace two residences and landlock a property in the southwestern quadrant. One residence would be displaced on the north side of Western Avenue, and a frontage road would be developed in the northwestern quadrant to provide access to a commercial property.

North of the proposed Western Avenue interchange, the proposed project would remain on new alignment crossing through farm fields. Two large outbuildings would be displaced. The proposed project would cross under Old Indian Road and intersect Whitefield Road at grade. North of the Whitefield Road intersection, the proposed project would remain on new alignment before crossing the Marshall/Putnam county line and rejoining existing IL 29 about 1,600 feet north of Dry Hollow Creek. Bikes would be guided from existing IL 29 to the outside paved shoulder of the proposed project. The proposed bridge at Dry Hollow Creek would be lengthened to provide a wildlife crossing.

After rejoining the IL 29 alignment, widening would continue on the west side of the highway as it approaches Putnam. A new connection between IL 29 and Center Street is proposed south of Bradford Road. Within Putnam, the 50-foot median would generally be maintained, and widening to the west would displace five residences and one business. Based on coordination with Senachwine Township, the median at IL 29 and Bradford Road would be increased to 64 feet because of the large number of trucks. The IL 29/Bradford Road intersection would be realigned slightly to the south. Bradford Road would be extended east of IL 29 and aligned east of the grain elevator and residential area and tie into Senachwine Lake Road (County Highway 13). Senachwine Lake Road would be reconstructed between the Bradford Road intersection and Condit Street. Senachwine Lake Road between IL 29 and Condit Street would remain open but would have to be maintained by others. The Bradford Road extension would provide access to the east side of the Putnam grain elevator and direct access to IL 29 at Senachwine Lake Road would not be permitted. The Douglas, Courtland, and Main Street intersections with IL 29 would be closed, leaving access to Putnam at Bradford Road and High Street, which would be realigned slightly to the south to improve sight distance at the intersection.

North of Putnam, widening would continue west of existing IL 29 through the Senachwine Valley Road intersection, which would be realigned slightly to the north. Widening would continue on the west through the Cabin Hill Road intersection to a restaurant and residences north of Cabin Hill Road. There the median would change from a 50-foot open, grass median to a 22-foot concrete barrier median to minimize impacts in the Miller-Anderson Woods Nature Preserve. A frontage road is proposed to provide access to the restaurant and adjacent residential properties.

North of the restaurant, the proposed project would shift to the east side of IL 29 close to the CSX Railroad to avoid the nature preserve. To avoid changes to the slope and ditch along the west side of IL 29 adjacent to the preserve, a guardrail would be located on the west side of the road. A 5- to 18-foot retaining wall will be constructed on the east to limit the amount of right of way needed from the railroad. Up to 28 feet of railroad right of way will be used to accommodate the shift to the east.

The mainline profile begins to rise, from a point 1,300 feet south of Kentville Road to I-180, to improve the intersection sight distance and the existing profile grade. The intersection of

Kentville Road would be 15 feet higher than the existing intersection, and the intersection angle with IL 29 would be improved to increase the stopping sight distance and safety of turning movements. The raise in profile would require some earthwork that affects bluffs north of the existing intersection. Retaining walls would be added to minimize impact to the bluff north of the proposed intersection where existing benching would remain in place.

2.4 Other Alternatives Considered

2.4.1 Transportation Control Measures

Transportation control measures attempt to reduce the number of auto trips and to increase transit use (primarily bus ridership) or carpooling. Transit service is unavailable in the project area, and there are no known plans to begin such service. The rural nature of the project area makes it unlikely that there ever will be sufficient ridership to warrant or support a transit service. Transportation control measures are not considered feasible for improving transportation continuity, facilitating modal interrelationships, or improving travel efficiency between IL 6 and I-180.

2.4.2 Transportation System Management

Transportation system management employs measures to maximize the efficiency and use of the highway to help alleviate or postpone the need to increase capacity. Such measures include engineering design features to improve traffic flow and safety, such as intersection capacity improvements, adding traffic signals, eliminating or consolidating driveways, adding passing lanes at critical locations, widening shoulders, and flattening slopes, among others. Although the transportation system management alternative might partially address some transportation deficiencies in the project area, it is not a feasible standalone solution for addressing future traffic demand, improving transportation continuity, or improving travel efficiency between IL 6 and I-180.

2.5 Selection of a Preferred Alternative

Based on the analysis of environmental impacts, engineering, traffic service considerations, public comments and agency comments received to date, a preferred alternative has been identified, as described in detailed in Section 2.3 of this document. Even so, final selection of an alternative will not be made until the impacts, comments on this document, and comments from the public hearing have been fully evaluated.